UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,228	05/31/2001	Fred R. Ziegler	74120-301403	8091

7590 10/21/2004	EXAMINER
MICHAEL DESANCTIS	MAURO JR, THOMAS J

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DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/870,228	ZIEGLER ET AL.
	Examiner	Art Unit	
	Thomas J. Mauro Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 May 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-15 are pending and are presented for examination. A formal action on the

merits of claims 1-15 follows.

Drawings

2.   New corrected drawings are required in this application because hand drawings are not

acceptable for reproducible quality. Under 37 CFR 1.84(l), drawings must be made by a process

which will give them satisfactory reproduction characteristics. Every line, number, and letter

must be durable, clean, black (except for color drawings), sufficiently dense and dark, and

uniformly thick and well defined. Applicant is advised to employ the services of a competent

patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer

prepares new drawings. The corrected drawings are required in reply to the Office action to

avoid abandonment of the application. The requirement for corrected drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

5.   Claim 5 recites the limitation "the network element" in line 1. There is insufficient

antecedent basis for this limitation in the claim. Nowhere in claims 1, 2 or 3 is there a reference

to a network element, as is mentioned in claim 5. Please provide proper antecedent basis for use

of this term.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Gross et al. (U.S.

6,553,515).

        With respect to claim 14, Gross teaches a method of identifying network failures in a

Voice over IP (VoIP) network comprising:

generating alarms from VoIP call records [Gross -- Col. 5 lines 58-67 – Col. 6 lines 1-

19, Col. 7 lines 50-51 – Col. 8 lines 1-20, Col. 11 lines 39-51 – Reports are generated from

past call records to indicate any problems or quality issues in the VoIP network].

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

9.   Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garakani

et al. (U.S. 6,781,959) in view of Jeon et al. (U.S. 5,940,480).

Regarding claim 1, Garakani teaches a method in a Voice over IP (VoIP) network

comprising:

producing information from VoIP call usage records associated with VoIP call traffic

[Garakani -- Col. 6 lines 23-67 – Call detail records (CDR) are generated for each VoIP call

to record usage].

Garakani fails to explicitly teach, producing failure rate information.

Jeon, however, discloses a method for determining failure probability and premature disconnect

probability from records generated for each call, i.e. CDR [**Jeon -- Col. 4 lines 20-33 and Col. 5**

lines 15-51 -- Both failure probability rate and premature disconnect probability rate are

calculated from previous call records].

Both Garakani and Jeon are concerned with providing information regarding call

failures/disconnects.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the failure rate information, as taught by Jeon into the

invention of Garakani, in order to provide an easy and rapid way to compile network call

statistics and further to provide cost effective representation of the quality of a data network.

Regarding claim 2, Garakani-Jeon teach the invention substantially as claimed, as

aforementioned in claim 1 above, including:

examining the VoIP call usage records at given time intervals [**Garakani -- Col. 6 lines**

23-67 -- Call detail records (CDR) are generated for each VoIP call to record usage]; and

producing the failure rate information for each of the given time intervals [**Jeon -- Col. 4**

lines 20-33 and Col. 5 lines 15-51 -- Both failure probability rate and premature disconnect

probability rate are calculated from previous call records. It is required and therefore

obvious that rate information is calculated for a given time interval because the rate is

based on the number of call failures divided by the number of call attempts, i.e. over a

given time interval].

10.	Claims 3-8, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Garakani et al. (U.S. 6,781,959) and Jeon et al. (U.S. 5,940,480), as applied to claim 2 above, in

view of Gross et al. (U.S. 6,553,515).

Regarding claim 3, Garakani-Jeon teach the invention substantially as claimed, as

aforementioned in claim 2 above, including examining VoIP call usage records **[Garakani --**

Col. 6 lines 23-67 – Call detail records (CDR) are generated for each VoIP call to record

usage] for producing failure rate information **[Jeon -- Col. 4 lines 20-33 and Col. 5 lines 15-51**

– Both failure probability rate and premature disconnect probability rate are calculated

from previous call records].

Garakani-Jeon fail to explicitly teach generating an alarm if the failure rate information exceeds

a defined threshold.

Gross, however, discloses a system for managing diagnostic and performance information which

includes setting up diagnostic control messages than when a parameter threshold is reached, an

alert will be generated via an alarm or paging device to a network professional/administrator

[Gross -- Col. 1 lines 45-65, Col. 7 lines 50-51 – Col. 8 lines 1-20 and Col. 16 lines 65-67 –

Col. 17 lines 1-11].

It would have been obvious to a person of ordinary skill in the art at the time the invention was

made to incorporate generating an alert upon reaching a defined threshold, as taught by Gross

into the invention of Garakani-Jeon, in order to better control VoIP calls by providing real-time

information about the quality of the calls or any problems that may be occurring [**Gross -- Col. 1**

lines 39-42].

Regarding claim 4, Garakani-Jeon-Gross teach the invention substantially as claimed, as

aforementioned in claim 2 above, including:

extracting information from VoIP call usage records [**Garakani -- Col. 6 lines 23-67 --**

Call detail records (CDR) are generated for each VoIP call to record usage];

generating a list identifying each network element with a count of the number of

occurrences, i.e. failures [**Jeon -- Col. 4 lines 20-33, Col. 5 lines 15-51 and Col. 5 lines 66-67 --**

Col. 6 lines 1-10 -- Both failure probability rate and premature disconnect probability rate

are calculated from previous call records and furthermore can be calculated for specific

elements, i.e. switches to determine hardware problems or poor quality values] associated

with disconnect cause codes [**Gross -- Col. 4 lines 59-67 and Col. 11 lines 22-67 -- Col. 12 lines**

22-28 -- VoIP system generates and transmits Q.931 standard control messages, which

contain IE's (Information Elements), one of which is ISDN disconnect cause codes (See

Attached Supporting Evidence of this protocol]; and

determining for each network element, a total count corresponding to a total number of

failures based upon number of calls [**Jeon -- Col. 4 lines 20-33 and Col. 5 lines 15-51 -- Both**

failure probability rate and premature disconnect probability rate are calculated from

previous call records].

While Garakani-Jeon-Gross fail to explicitly teach grouping the results in a specific way, it is

obvious that the information can be grouped and displayed in any manner, including number of

failures by disconnect cause codes in order to provide a more user-friendly and directed look at

failures based upon a given category.

Regarding claim 5, Garakani-Jeon-Gross teach the invention substantially as claimed, as

aforementioned in claim 3 above, including a VoIP gateway **[Garakani -- Col. 3 lines 17-29**

and Col. 3 lines 65-67 – Col. 4 lines 1-9 – Station gateways are VoIP gateways used for

connection analog phones to VoIP networks].

Regarding claim 6, Garakani-Jeon-Gross teach the invention substantially as claimed, as

aforementioned in claim 3 above, including wherein the disconnect cause codes are ISDN

disconnect cause codes **[Gross -- Col. 4 lines 59-67 and Col. 11 lines 22-67 – Col. 12 lines 22-**

28 – VoIP system generates and transmits Q.931 standard control messages, which contain

IE's (Information Elements), one of which is ISDN disconnect cause codes (See Attached

Supporting Evidence of this protocol].

Regarding claim 7, Garakani-Jeon-Gross teach the invention substantially as claimed, as

aforementioned in claim 3 above, including wherein the failure information is produced for each

network element **[Jeon -- Col. 4 lines 20-33, Col. 5 lines 15-51 and Col. 5 lines 66-67 – Col. 6**

lines 1-10 – Both failure probability rate and premature disconnect probability rate are

calculated from previous call records and furthermore can be calculated for specific

elements, i.e. switches to determine hardware problems or poor quality values].

Regarding claim 8, Garakani-Jeon-Gross teach the invention substantially as claimed, as aforementioned in claim 7 above, including wherein the failure rate information is based on failure count and total count **[Jeon -- Col. 5 lines 32-54 – Failure rate information is based on a count of call failures and the total number of calls]**.

Regarding claim 10, Garakani-Jeon-Gross teach the invention substantially as claimed, as aforementioned in claim 8 above, including wherein the failure rate information comprises a failure count **[Jeon -- Col. 5 lines 32-40 – Statistics database stores the number of call failures, i.e. failure count, which is used to calculate the rate information]**.

Regarding claim 12, Garakani-Jeon-Gross teach the invention substantially as claimed, as aforementioned in claim 3 above, including reporting the failure rate information electronically **[Gross -- Col. 7 lines 50-51 – Col. 8 lines 1-20 and Col. 15 lines 64-67 – Col. 16 lines 26-42 – Reports are sent to network administrator electronically]**.

11.   Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garakani et al. (U.S. 6,781,959), Jeon et al. (U.S. 5,940,480) and Gross et al. (U.S. 6,553,515), as applied to claims 8 and 10 above respectively, in view of Walter (U.S. 5,999,604).

Regarding claim 9, Garakani-Jeon-Gross teach the invention substantially as claimed, as aforementioned in claim 8 above, but fails to explicitly teach expressing the failure rate as a number of failures per failure types.

Walter, however, discloses a method for analyzing service impacts based upon call detail records and call failure ratios which includes presenting information as the number of failed calls per failure category [**Walter -- Col. 2 lines 15-19 and Col. 6 lines 4-24**].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the expressing of failure rate as a number of failures per failure type, as taught by Walter into the invention of Garakani-Jeon-Gross, in order to provide a more detailed breakdown of the failure information which will allow the network professional/administrator to better be able to interpret and respond to network problems.

Regarding claim 11, Garakani-Jeon-Gross-Walter teach the invention substantially as claimed, including generating an alarm [**Gross -- Col. 1 lines 45-65, Col. 7 lines 50-51 – Col. 8 lines 1-20 and Col. 16 lines 65-67 – Col. 17 lines 1-11 – Alarms are generated if applicable criteria are met**] if two thresholds are exceeded [**Walter -- Col. 6 lines 60-67 – Col. 7 lines 1-4 and Col. 9 lines 1-13 and lines 42-54 – Alerting comprises two levels, i.e. thresholds, namely, a warning criteria if a first threshold is reached and a critical criteria if a second threshold is reached**].

Furthermore Garakani-Jeon-Gross-Walter teach the statistical criteria being monitored includes failure rate [**Jeon -- Col. 4 lines 20-33 and Col. 5 lines 15-51 – Both failure probability rate and premature disconnect probability rate are calculated from previous call records**] and

failure count [**Jeon -- Col. 5 lines 32-40 – Statistics database stores the number of call**

failures, i.e. failure count, which is used to calculate the rate information].

It would have been obvious that the dual threshold criteria could monitor any given number of

metrics, however, given one of ordinary skill in the art, it would have been obvious to include

those metrics being monitored, namely, failure rate and count as the thresholds in order to allow

for proper alerting and warning of specific important network metrics concerning quality and

failure rates.

12.   Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter

(U.S. 5,999,604) in view of Gross et al. (U.S. 6,553,515).

        Regarding claim 13, Walter teaches a method of detecting network failures in a Voice

over IP (VoIP) network comprising:

        producing a failure rate from call detail records (CDR) associated with call traffic for a

given time interval [**Walter -- Col. 5 lines 11-32, Col. 6 lines 4-24, Col. 8 lines 56-65 and Col.**

10 lines 35-52 – Failure count/rate information is obtained from examining CDR's over a

given time interval, i.e. 15 minutes]; and

        determining if the failure rate exceeds a defined threshold [**Walter -- Col. 6 lines 60-67,**

Col. 9 lines 42-54 and Col. 10 lines 35-52 – System examines whether statistical information

monitored exceeds defined thresholds].

Walter fails to teach a VoIP network and generating an alarm.

Gross, however, discloses a system for managing diagnostic and performance information in a VoIP network which includes setting up diagnostic control messages which will provide an alert message via an alarm or paging device to a network professional/administrator **[Gross -- Col. 1 lines 45-65, Col. 5 lines 58-67 – Col. 6 lines 1-11, Col. 7 lines 50-51 – Col. 8 lines 1-20 and Col. 16 lines 65-67 – Col. 17 lines 1-11]**.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate generating an alert upon reaching a defined threshold, as taught by Gross into the invention of Walter, in order to better control VoIP calls by providing real-time information about the quality of the calls or any problems that may be occurring **[Gross -- Col. 1 lines 39-42]**.

Regarding claim 15, this is a computer program claim corresponding to the method claimed in claim 13 above. It has similar limitations; therefore, claim 15 is rejected under the same rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..
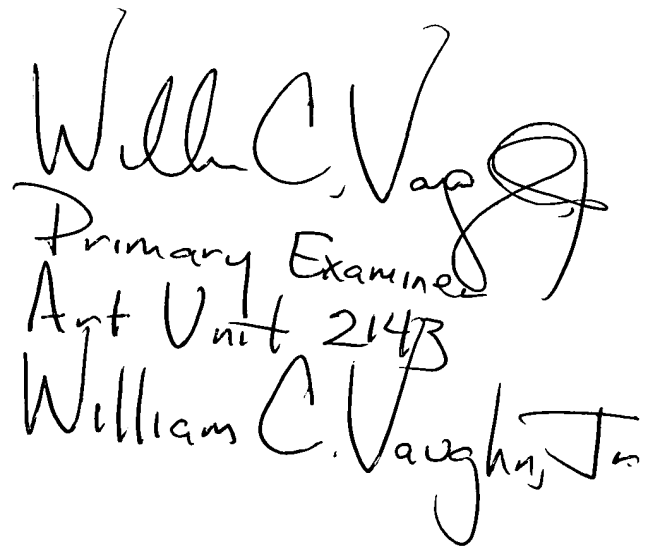
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJM
October 15, 2004

Primary Examiner
Art Unit 2143
William C. Vaughn Jr.